

***Department of Biostatistics and Epidemiology  
&  
OSCTR Biostatistics, Epidemiology, and Research  
Design (BERD) Core***

**SEMINAR**

**RELIABILITY IN CLINICAL AND PUBLIC HEALTH RESEARCH**

**Tabitha Garwe, PhD, MPH**

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Associate Director, OSCTR BERD

Director, Surgical Outcomes Research, OUHSC Department of Surgery

University of Oklahoma Health Sciences

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Associate Professor of Epidemiology

GKFF Chair in Public Health Epidemiology

University of Oklahoma Health Sciences (OU-Tulsa)

**Friday, November 22, 2024**

**12:00 PM – 2:00 PM**

**Location:** Hudson College of Public Health Auditorium (CHB 150)  
and Virtual through Zoom

**Box lunches will be provided for the first 25 attendees.**

**Registration is required in advance for this meeting.**

After registration, you will receive a confirmation email containing the zoom link and information about the workshop materials.

**FORMAT:** The format includes a didactic lecture and some sample SAS codes in assessing reliability. The session will be recorded and posted after the end of the workshop.

**Course materials** can be downloaded or printed for personal use prior to attendance from the following website.

**Website** <https://osctr.ouhsc.edu/short-course>

**PREREQUISITE:** None

**DESCRIPTION:** Researchers and clinicians rely on measurement to understand, evaluate, and differentiate individuals' physical and behavioral characteristics. In clinical, epidemiological, and social research, it is common to measure characteristics that are not directly observable, such as blood pressure, stroke volume, anxiety, and pain. The value of these measurements in research and clinical practice depends on their reliability, i.e., the degree to which they are consistent and free from error. Therefore, reliability is a critical prerequisite for any measurement to be useful. In medicine, researchers often want to compare different methods of measuring a characteristic to determine whether a new, quicker, or more affordable method agrees sufficiently well with an established method for clinical purposes. Commonly used statistical techniques such as comparison of means or correlation analysis, do not answer whether the methods provide the same measurements on average or if there is any relative bias.

This seminar will provide a brief overview of commonly used techniques to assess reliability. It will cover statistical methods and related procedures to evaluate reliability according to the type of measurement and the nature of the response scale. Examples from clinical and public health research will be used to demonstrate data analysis, including discussions on the necessary syntax and interpretation of the resulting outputs. By the end of the seminar, participants will be able to conduct appropriate statistical analyses and interpret outputs to evaluate reliability data.

**REGISTRATION:** Registration is required by November 21 at 6 pm. Registration can be completed by clicking the hyperlink on the first page or at the following website <https://osctr.ouhsc.edu/short-course>.

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**PARKING:** The College of Public Health Building is located on the corner of 13th Street and Phillips Avenue. Parking is available on the north side of the building. If you are driving north on Phillips Ave, you will see a sign for Lot A on the east side of the street. Pull into this lot. You will need to press the emergency button on the speaker box and indicate that you are attending a workshop in the College of Public Health Building for the parking gate to be raised.

## **FACULTY BIOGRAPHICAL SUMMARY**

**Dr. Tabitha Garwe** is an Associate Professor of Epidemiology at OUHSC and the Co-director of the Biostatistics, Epidemiology, and Research Design Core of the Oklahoma Shared Clinical and Translational Resources (OSCTR). She is also the Director of Surgical Outcomes Research in the Department of Surgery (OUHSC). Prior to joining OUHSC, Dr. Garwe worked as the Lead Trauma Epidemiologist at the Oklahoma State Department of Health. Dr. Garwe teaches clinical epidemiology and other epidemiology methods courses in the Department of Biostatistics and Epidemiology. Her independent research interests include clinical prediction models, trauma systems, and outcomes.

**Dr. Nasir Mushtaq** is an Associate Professor of Epidemiology at the University of Oklahoma Health Sciences with a joint appointment at the Department of Biostatistics and Epidemiology, Hudson College of Public Health (HCOPH), and the Department of Family and Community Medicine, OU-TU School of Community Medicine (SCM). He also serves as the Associate Director of the Design and Computational Resources (DCR) unit of the OSCTR. Dr. Mushtaq teaches graduate-level courses at HCOPH and contributes to the research training of medical students and residents at SCM. His research areas of interest include tobacco control, psychometrics, and collaborative clinical research.